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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			EXAMINER AGA, SORI A	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/725,818

Applicant(s)

BEACH ET AL.

Examiner

Sori A. Aga

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,8-13 and 15-23 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/01/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/04/2006 and 12/01/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's response to restriction requirement was submitted in September 4, 2007.

Applicant's election without traverse of group I (claims 1,2 and 8-12) of the application filed in December 01,2003 is acknowledged.

Claims 13,15-23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Krebs et al. (US 4,519,068) (herein after Krebs).

Claim 1:

Krebs teaches General Communications Controller (data switching hub) through which data communication is provided between a host computer (central computer) and portable radios (mobile units) via channel communications modules connected to transmitter and receivers ('channel communications modules' together with the 'transmitters' and 'receivers' make up access points). [See figure 1] [Column 8 lines 38-40,44-48].

The General Communications Controller (herein after GCC) as thought by Krebs [fig. 1] is considered to be the substantially the same as the claimed data switching hub because

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the GCC routes message signals (data) to selected CCM based on the location of the portable radio and the serving CCM for that particular location. [Column 8 lines 38-48] Regarding the Access points each providing a conduit for communications independent of destination address; Krebs teaches that each mobile station compares the address included in the headers of received messages with its own address and decides whether to process the data or not (filters data bits that belong to the mobile station) [Column 16 lines 41-44]. A person having ordinary skill in the art would recognize said filtering as a function of the transmission/receive method known as 'broadcasting'. In addition, Krebs teaches that a single channel is used by the transmitter to serve all the corresponding mobile units [008 line 63]. A person having ordinary skill in that art would know that it is inherent that the CCM/transmitters and receivers mentioned in Krebs provide communications to the mobile units independently of destination address.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs (US 4,519,068) (herein after Krebs) in view of Ahearn et al. (US 5,926,463) (herein after Ahearn).

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Claim 2:

All the limitations of claim 1 are included in claim 2. Krebs teaches all the limitations of claim 1 as discussed above regarding claim 1.

Regarding the hub being arranged to maintain a routing list correlating source address data with ports of the switching hub; Krebs teaches that the GCC maintains a list associating transmitters, the zone served by the transmitters with other information associated with the portable radio [column 9 lines 46-48 and lines 54-56].

However, Krebs does not explicitly teach that the GCC (hub) monitors source address and use said list to selectively provide data communication. However, Ahearn in the same field of endeavor, teaches that an intelligent switch looks at source addresses contained in a frame and build a look-up table which is used to decide which of the links (corresponding nodes) should be used to forward the frame [column 2 lines 8-17].

Therefore, it would have been obvious, at the time of the invention for a person having ordinary skill in the art, to include a table that is created and maintained by monitoring source addresses contained in frames passing through the CCM (routing switch). This is useful since it is necessary that the GCC to have a reasonably accurate determination of the location of each portable radio [Krebs column 8 lines 43-45].

Regarding claim 8:

- Regarding the method of connecting central computer with switching hub and plurality of access points with the ports of the switching hub; Krebs teaches that GCC

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(switching hub) is connected to multiple CCMs (which, coupled with Transmitters and recovers makeup Access Points) [see figure 1]. Krebs also teaches that the mobile units are associated with respective mobile units which server selected zones containing selected mobile units [column 8 lines 44-49; column 9 lines 46-48].

- Krebs teaches received message includes channel data block, which includes stations address [column 1 lines 50 and 54]. Krebs also teaches that this address is read and verified by the GCC to determine if this address is assigned to an active and valid portable radio. Therefore, Krebs teaches that the data received by the GCC includes address of targeted portable unit (destination address each identifying a mobile unit).
- Krebs teaches that it is necessary to know the location of each portable radio and transmitters serving said location as discussed above. However, Krebs does not explicitly teach maintaining a routing list. However, Ahearn in the same field of endeavor teaches building (maintaining a routing list) a table that is used to decide which of the links (corresponding nodes) should be used to forward the frame [column 2 lines 8-17]. Therefore, a person having ordinary skill in the art would have been motivated by Ahearn to include a table that is created and maintained by monitoring source addresses contained in frames passing through the CCM (routing switch). This is useful since it is necessary that the GCC to have a reasonably accurate determination of the location of each portable radio.
- Krebs also teaches the mobile and portable radios communicate with the GCC by way of the CCMs. Therefore, Krebs teaches that the CCM (hub) is operated to relay data communications network to said access points. [column 8 lines 38-40]

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- Krebs teaches that the CCM is operated to relay data to the access points which in turn transmit said data to the portable radio as discussed above. Regarding the transmitters relaying said data independently of the destination addresses; Krebs teaches that each mobile station compares the address included in the headers of received messages with its own address and decides whether to process the data or not (filters data bits that belong to the mobile station) [Column 16 lines 41-44]. A person having ordinary skill in the art would recognize said filtering as a function of the transmission/receive method known as 'broadcasting'. This is an indication that the CCM/transmitters and receivers mentioned in Krebs provide communications to the mobile units independently of destination address.

Claim 9:

All the limitations of claim 8 are included in claim 9. The references teach all the limitations of claim 9 as discussed above. Krebs also teaches that the CCMs are not used to transmit messages directed at mobile units associated with other access points [column 8 lines 41-42].

Claim 10:

Krebs teaches that the GCC (hub) receives message signals from mobile radios by way of CCM (Access points) [column 3 lines 52-54]. Therefore, Krebs teaches data

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communication is provided from mobile units to the access points. Krebs also teaches that the basic information unit in the system includes channel data block, which includes stations address [column 1 lines 50 and 54; column 6 line 38; column 14 line 4].

Therefore, Krebs teaches that the data received by the GCC includes address of targeted portable unit (destination address and source address).

Krebs also teaches data is relayed the access points to the switching hub [column 3 lines 52-54].

Krebs also teaches that the GCC (switching hub) is used to relay data from CCM (access points) to the host computer (wired network) which in turn is connected to other GCCs (and GCCs are connected to other access points). [column 3 lines 42-45] However, Krebs does not explicitly teach that the GCC (hub) uses source address to update a routing list and use said list to selectively provide data communication. However, Ahearn in the same field of endeavor, teaches that an intelligent switch looks at source addresses contained in a frame and build a look-up table which is used to decide which of the links (corresponding nodes) should be used to forward the frame [column 2 lines 8-17].

Therefore, it would have been obvious for a person having ordinary skill in the art, at the time of the invention, to include a table that is created and maintained by monitoring source addresses contained in frames passing through the CCM (routing switch). This is useful since it is necessary that the GCC to have a reasonably accurate determination of the location of each portable radio [Krebs column 8 lines 43-45].

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3. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs et al. and Ahearn et al. as applied to claim 8 above, and further in view of Mitts et al. (US 5,912,885) (herein after Mitts).

Claims 11 and 12:

All the limitations of claim 10 are included in claims 11 and 12. The references teach all the limitations of claim 10 as discussed above. Said references teach that data messages including addresses of mobile units cause the hub to update a routing list with their addresses as discussed above regarding claim 10.

Krebs also teaches that the mobile units are associated with one or more zones which in turn are associated with access points for data communication. [column 8 lines 44-49; column 9 lines 46-48]

However, Krebs does not explicitly teach that the mobile units and access points are arranged to send a message upon said association of mobile units with access points.

However, Mitts in the same field of endeavor, teaches that a mobile terminal (mobile unit) sends a request (send data communication message) to a new access point when it observes that the connection on the access point it is associated with is weakening. Mitts also teaches that the access point sends the message to the switch (switching hub) [column 5 lines 20-24]. Therefore, it would have been obvious, at the time of the invention, for a person having ordinary skill in the art, to arrange the mobile units and access points to send a message upon said association of mobile units with access points in order to enable the GCC to have a reasonably accurate determination of the location of

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each portable radio in a reasonable pace (as soon as a mobile unit becomes associated with an access point).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sori A. Aga whose telephone number is (571) 270-1868. The examiner can normally be reached on M-Th 7:30-5:00, F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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